

# Mobile Van Healthcare Services for Truck Drivers: A Comprehensive Review

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**Abstract:** *Mobile van healthcare services represent a promising intervention to overcome these barriers. This review paper aims to comprehensively evaluate the effectiveness of mobile van health services in improving the health outcomes of truck drivers. This paper discusses strategies for service delivery, community engagement, and resource allocation in sustainable mobile healthcare programs, focusing on enhancing healthcare access for truck drivers, including addressing non-communicable diseases (NCDs) like hypertension and diabetes, and managing common ailments. The study utilized a structured approach to search various databases, including PubMed, Scopus, and Google Scholar. The study reviewed the impacts of these services on multiple health metrics, considering accessibility, utilization, health outcomes, feasibility, and cost-effectiveness. The evaluation integrated findings from research on mobile health initiatives and accounted for the specific health requirements and barriers encountered by truck drivers and identified specific health needs and barriers. The findings suggest that mobile units can overcome geographical barriers and scheduling conflicts, potentially increasing access to preventative care and treatment for this hard-to-reach population.*

**Keywords:** Truck Driver, Mobile Health Clinic, Health Care, Driver Safety

## 1. Introduction

The trucking industry, a cornerstone of global commerce, is confronted with a significant public health challenge: the deteriorating health of its drivers. This challenge is primarily driven by the demanding nature of the occupation, which involves long working hours, irregular schedules, sedentary lifestyles, and limited access to conventional healthcare facilities [1]. Due to these factors, truck drivers often struggle to access regular healthcare, a situation exacerbated by their frequent travel and prolonged periods of inactivity [2].

As a result, this population exhibits higher rates of chronic conditions such as cardiovascular disease, diabetes, and musculoskeletal disorders [3], in addition to mental health issues including stress, depression, and sleep disorders [4]. These health problems are not only detrimental to the drivers' individual well-being but also pose significant safety risks on the roads, adversely affecting the overall productivity of the industry [5]. Furthermore, the broader public is also at risk due to the increased potential for road accidents linked to driver health issues [6,7].

Mobile van healthcare services represent a promising intervention to overcome these barriers. By bringing essential healthcare directly to truck drivers at convenient locations, such as truck stops and designated rest areas, these

services aim to improve access to preventative care, screenings, and treatment [5] [8].

Existing research demonstrates the potential of mobile healthcare services in delivering primary care services, including addressing non-communicable diseases (NCDs) like hypertension and diabetes, and managing common ailments. [5, p. 1,3-4] [7, p. 6]

This review paper aims to comprehensively evaluate the effectiveness of mobile van healthcare services in improving the health outcomes of truck drivers. This review will discuss strategies for service delivery, community engagement, and resource allocation in sustainable mobile healthcare programs, focusing on enhancing healthcare access for truck drivers.

## 2. Material and Method

A comprehensive literature review was undertaken to identify pertinent studies regarding healthcare services tailored for truck drivers in India. The study utilized a structured approach to search various databases, including PubMed, Scopus, and Google Scholar, incorporating essential terms like "mobile van healthcare," "mobile medical units," "mobile clinics," and "truck drivers."

## 3. Findings

This section presents the findings of a comprehensive literature review evaluating the effectiveness of mobile van healthcare services in improving health outcomes among truck drivers. The study reviewed the impacts of these services on multiple health metrics, considering accessibility, utilization, health outcomes, feasibility, and cost-effectiveness. The evaluation integrated findings from research on mobile health initiatives and accounted for the specific health requirements and obstacles encountered by truck drivers. Because there are not many studies that focus on mobile van services for this group, the review also includes useful information from studies that look at mobile health programs for other underserved groups and health problems that truck drivers often have.

### 3.1 Addressing Healthcare Access Barriers:

Many studies highlight the challenges of accessing healthcare for underserved populations. Research on mobile health interventions for different groups, like homeless people [9] and migrant populations [10], shows that these units can get around problems with transportation and location. This suggests that mobile van services could similarly improve access for truck drivers who face difficulties accessing traditional healthcare due to their itinerant lifestyle and irregular schedules (Jbilou et al., 2024).

While only a few studies directly address mobile van utilization among truck drivers, the findings suggest that mobile units can overcome geographical barriers and scheduling conflicts, potentially increasing access to preventative care and treatment for this hard-to-reach population. However, challenges related to service location, operating hours, and the design of the mobile unit itself need to be considered to maximize utilization.

### 3.2 Mobile Health Interventions and Outcomes

The impact of mobile van services on specific health outcomes varied across studies. Research on mobile interventions for chronic diseases like hypertension and diabetes [11] showed positive effects on disease management and patient outcomes. Similarly, studies on mobile mental health interventions [12] demonstrated improvements in mental health indicators. A study in India demonstrated the potential of mobile medical units to reach a large number of truck drivers, but also highlighted challenges related to community mobilization, staff workload, and supply chain management. [5, p.6]

Similarly, research in South Africa explored the accessibility and appropriateness of roadside wellness centers, revealing both positive aspects and areas for improvement in service delivery and utilization [8, p. 1,5,9] These findings suggest that mobile van services could be effective in addressing the prevalent health issues among truck drivers, such as cardiovascular disease, diabetes, and mental health problems.

### 3.3 Feasibility and Implementation Challenges:

Research on the implementation of mobile health programs identifies several key challenges, including resource constraints [13], staff training and workload [14], data management and integration [15], and community engagement [9, p 2). Similar issues have been reported in other studies [16], indicating that mobile van services for truck drivers are likely to encounter comparable obstacles. Successful implementation of such programs will require meticulous planning, adequate resource allocation, and effective strategies for community involvement and staff training.

Moreover, insights from mobile health initiatives in other contexts—such as mobile testing for respiratory infections [17] and mobile stroke units [18] offer valuable lessons that

can inform the design and execution of a mobile healthcare program tailored to the unique needs of truck drivers.

### 3.4 Cost-Effectiveness

The cost-effectiveness of mobile health interventions is a crucial consideration. Studies examining the cost-effectiveness of outreach acute care for nursing homes [19] and mobile integrated healthcare interventions [20] provide insights into the potential economic benefits of mobile healthcare delivery. A comprehensive review of mobile van healthcare services for truck drivers would need to assess the cost-effectiveness of this approach compared to traditional healthcare delivery models.

## 4. Conclusion

The limited number of studies specifically evaluating mobile van healthcare services for truck drivers constrains the review's findings. Much of the available evidence is derived from research on mobile health interventions targeting other populations or specific health conditions. Although a few studies provide direct evaluations of mobile van healthcare services for truck drivers, their scarcity prevents definitive conclusions about the impact of these services on specific health outcomes.

Future research should prioritize synthesizing evidence from studies on mobile health interventions that address the unique needs of truck drivers. Moreover, such research should assess the feasibility, cost-effectiveness, and implementation challenges of these programs. Focused investigations on truck drivers and mobile van healthcare services are essential to provide a more definitive evaluation of their effectiveness.

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## Author Profile



**Mr. Anand Chinnkaran** is an accomplished development strategist and CSR and public health specialist with over 20 years of experience in operations and project management. He holds a Master's degree in Social Work, an LLB, and a Master's in Commerce, which equip him to navigate complex challenges and drive sustainable change. Currently, he is pursuing a PhD in Social Work from Annamalai University (2019-2025).